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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/978,550	10/18/2001	Seung Hoon Hwang	HI-0046	5062
34610	7590	09/21/2005	EXAMINER	
FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153			MURPHY, RHONDA L	
			ART UNIT	PAPER NUMBER
			2667	

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 09/978,550	Applicant(s) HWANG ET AL.	
	Examiner Rhonda Murphy	Art Unit 2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 12-23 and 25-28 is/are rejected.
- 7) ☒ Claim(s) 8-11 and 24 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/18/01 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/19/03</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. Figures 1 – 5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 – 7, 12, 13, 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hall et al. (US 6,208,871) in view of Longoni et al. (US 2001/0046240).

Regarding claim 1, Hall teaches transmitting information for an uplink synchronous transmission from a radio network controller to a first base station and a second base station (Fig. 5, col.8, lines 25-39); resetting a radio link between a mobile station and the

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second base station, based on the information for the uplink synchronous transmission (col. 8, lines 33-35; col. 9, lines 54-62); and adjusting a base time for the uplink synchronous transmission of communication data to match the base time of an uplink synchronization scheme of the second base station (col. 10, lines 19-30, 38-50).

Hall fails to disclose the mobile station adjusting the base time to match that of the second base station.

However, Longoni teaches the mobile station adjusting the base time for synchronous transmission of data to match that of the second base station (page 4, paragraph 46).

In view of this, it would have been obvious to one skilled in the art to modify Hall's method by having the mobile station perform the time adjustment in order to synchronize frames and compensate for the time difference.

Regarding claim 2, Hall teaches the information for the uplink synchronous transmission as an identifier of the uplink synchronous transmission scheme (col. 8, lines 47-51).

Regarding claim 3, Hall teaches the information for the uplink synchronous transmission as a scramble code of the uplink synchronous transmission scheme (col. 8, lines 49-50).

Regarding claim 4, Hall teaches the information for the uplink synchronous transmission as a channelizing code number of the uplink synchronous transmission scheme (col. 4, lines 35-45).

Regarding claim 5, Hall teaches transmitting a measurement control command for measuring an uplink synchronous timing (col. 10, lines 38-41).

Regarding claim 6, Hall teaches the measurement control command as stated above in the rejection of claim 5. It would have been obvious for the measurement control command to include a measurement type and a reporting characteristic, since the measuring command must be defined for what is being measured.

Furthermore, Longoni teaches a measurement type and reporting characteristic (page 5, paragraph 53).

In view of this, it would have been obvious to one skilled in the art to modify Hall's method by including such measurement type and reporting characteristic, so as to accurately perform a specific measurement when commanded.

Regarding claim 7, Hall teaches resetting the radio link by converting a mode of the uplink synchronous transmission scheme (col. 8, lines 33-35; col. 9, lines 54-62).

Regarding claim 12, Hall teaches transmitting communication data to a first base station (col. 8, lines 25-39); checking a second pilot signal from a second base station (col. 8, lines 33-35); transmitting communication data to the second base station (col. 8, lines 36-39); checking a first pilot signal from the first base station and rechecking the second pilot signal from the second base station (col. 8, lines 31-35); and changing a base time for the synchronous transmission scheme used to a base time of the second base station (col. 10, lines 19-30, 38-50).

Hall fails to disclose the mobile station changing the base time to that of the second base station.

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However, Longoni teaches the mobile station changing a base time for synchronous transmission to that of the second base station (page 4, paragraph 46).

In view of this, it would have been obvious to one skilled in the art to modify Hall's method by having the mobile station perform the time adjustment in order to synchronize frames and compensate for the time difference.

Regarding claim 13, Hall teaches the synchronous transmission scheme is an uplink synchronous transmission scheme (col. 8, lines 47-51).

Regarding claim 15, Hall teaches changing the base time for the synchronous transmission scheme. It would have been obvious to change the base time in accordance with the quality of a radio link between either the first base station and the mobile station or the second base station and the mobile station, so to perform proper timing adjustment to synchronize transmission.

Regarding claim 16, Hall teaches the radio link is between the second base station and the mobile station (Fig. 2).

Regarding claim 17, Hall teaches changing the base time for the synchronous transmission scheme is conducted in accordance with the number of mobile stations linked to either the first base station or the second base station (col. 5, lines 12-14).

Regarding claim 18, Hall teaches changing the base time for the synchronous scheme is conducted after comparing the number of mobile stations linked to the second base station with the number of mobile stations linked to the first base station (col. 5, lines 29-33, 52-56).

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3. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hall et al. (US 6,208,871) in view of Wheatley III et al. (US 6,151,311).

Regarding claim 14, Hall teaches transmitting the communication data to the second base station.

Hall fails to explicitly disclose transmitting data to the second base station when the intensity of the checked second pilot signal exceeds a threshold.

However, Wheatley III discloses the transmission of data when the intensity of the checked second pilot signal exceeds a threshold (col. 2, lines 42-44).

In view of this, it would have been obvious to one skilled in the art to modify Hall's method by transmitting data when a threshold has exceeded, for the purpose of handing over communication to a base station with a stronger pilot signal.

4. Claim 19 – 23, 25 – 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hall et al. in view of Wallentin (W0 99/27740).

Regarding claim 19, Hall teaches measuring a first communication characteristic between a common terminal and a target terminal (col. 10, lines 38-41); establishing a synchronous communication link between the common terminal and the target terminal (col. 8, lines 28-34), the synchronous communication link established in accordance with a timing adjustment value derived from the first communication characteristic measurement (col. 10, lines 38-47).

Hall fails to explicitly disclose transitioning communication service support for the common terminal from a current terminal to the target terminal, using the synchronous

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communication link.

However, Wallentin discloses transitioning communication service support for the common terminal from a current terminal to the target terminal, using the synchronous communication link (page 9, lines 3-12).

In view of this, it would have been obvious to one skilled in the art to modify Hall's system by transitioning service support for a common terminal from a current to a target terminal, in order to allow handover to occur and maintain further communication.

Regarding claim 20, Hall teaches the first communication characteristic is a communication propagation time (col. 10, lines 43-47).

Regarding claim 21, the combined method of Hall and Wallentin teach measuring a communication characteristic. Furthermore, it would have been obvious to measure not only one characteristic, but also a second characteristic, in order properly allow for handover and maintain further communication.

Regarding claim 22, the combined method of Hall and Wallentin teach communication characteristics. It would be obvious for a communication characteristic to be a received quality of a signal transmitted separately by the target terminal and the current terminal and received by the common terminal, in order to determine signal strength and further determine if handover is required.

Regarding claim 23, the combined method of Hall and Wallentin teach communication characteristics. It would be obvious for a communication characteristic to be the amount of communication traffic supported by the target terminal and by the current terminal, so

as to avoid handoff to a terminal that's incapable of supporting the incoming communication traffic.

Regarding claim 25, Hall teaches establishing a communication channel between the common terminal and the target terminal through a soft handover procedure (col. 1, lines 47-50) prior to measuring the first communication characteristic (col. 1, lines 47-50).

Hall fails to disclose and releasing a communication channel between the common terminal and the current terminal after transitioning the communication service support.

However, it would have been obvious to one skilled in the art to release a communication channel between the common terminal and the current terminal after transitioning the communication service support, in order to handoff the communication link to the other terminal.

Regarding claim 26, Hall teaches communicating a request from a source network controller to a target network controller for the target network controller to initiate the measurement of the first communication characteristic (col. 10, lines 38-41).

Hall fails to explicitly teach the source network controller managing the operation of the current terminal and the target network controller managing the operation of the target terminal.

However, Wallentin teaches the source network controller managing the operation of the current terminal and the target network controller managing the operation of the target terminal (Fig. 2; page 3, lines 17-28, page 4, lines 12-19).

In view of this, it would have been obvious to one skilled in the art to modify Hall's method by managing the operation of the terminals, in order to effectively maintain the communication link between the controller and terminal.

Regarding claim 27, Hall teaches a common terminal that communicates with both a target terminal and a current terminal and measures a communication characteristic between the common terminal and the target terminal (col. 10, lines 38-41); and a network controller that manages the operation of the current terminal and the target terminal (col. 8, lines 31-39); the network controller establishes a synchronous communication link between the common terminal and the target terminal (col. 8, lines 19-31) based on a timing adjustment value (col. 10, lines 38-50).

Although Hall teaches characteristic measurements, Hall fails to explicitly disclose the communication characteristic measurement and transitions communication service support for the common terminal from the current terminal to the target terminal, using the synchronous communication link.

However, Wallentin teaches transitioning communication service support for the common terminal from the current terminal to the target terminal, using the synchronous communication link (page 9, lines 3-12).

In view of this, it would have been obvious to one skilled in the art to modify Hall's method by transitioning the communication service support, in order to handoff the communication link to the other terminal.

Regarding claim 28, Hall teaches a signal measuring means for measuring a first communication characteristic between a target terminal and the subscriber device (col.

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8, lines 31-33); a link establishment means for establishing a synchronous communication link between the target terminal and the subscriber device (col. 8, 29-31), the synchronous communication link established in accordance with a timing adjustment value derived from the first communication characteristic measurement (col. 10, lines 38-43).

Hall fails to explicitly disclose a link handover means for transitioning communication service support for the subscriber device from a current terminal to the target terminal, using the synchronous communication link.

However, Wallentin teaches a link handover means for transitioning communication service support for the subscriber device from a current terminal to the target terminal, using the synchronous communication link (page 9, lines 3-12).

In view of this, it would have been obvious to one skilled in the art to modify Hall's method by transitioning the communication service support, in order to handoff the communication link to the other terminal.

Allowable Subject Matter

5. Claims 8-11 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

*St-Pierre (US 5,883,888) discloses a seamless soft handoff in a CDMA cellular communications system.

*Galyas et al. (US 6,138,020) discloses a quality-based handover.

*Muszynski (US 5,790,528) discloses a semi-hard handoff in a cellular telecommunications system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rhonda Murphy whose telephone number is (571) 272-3185. The examiner can normally be reached on Monday - Friday 8:00 - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Rhonda Murphy

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